Lab Assignment
& Solution

Cybersecurity Professional Program

Introduction to Python
for Security

Introduction to Programming

PY-01-LS2
Comments & Print

Note: Solutions for the instructor are shown inside the green box.

Lab Objective

Learn how to write a program that prints messages to the screen.

Lab Mission

Use Python to build your first program that will print a string to the console.

Lab Duration

10–15 minutes

Requirements

- Basic knowledge of PyCharm

Resources

- Environment and tools
  - Windows
    - Python 3
    - PyCharm

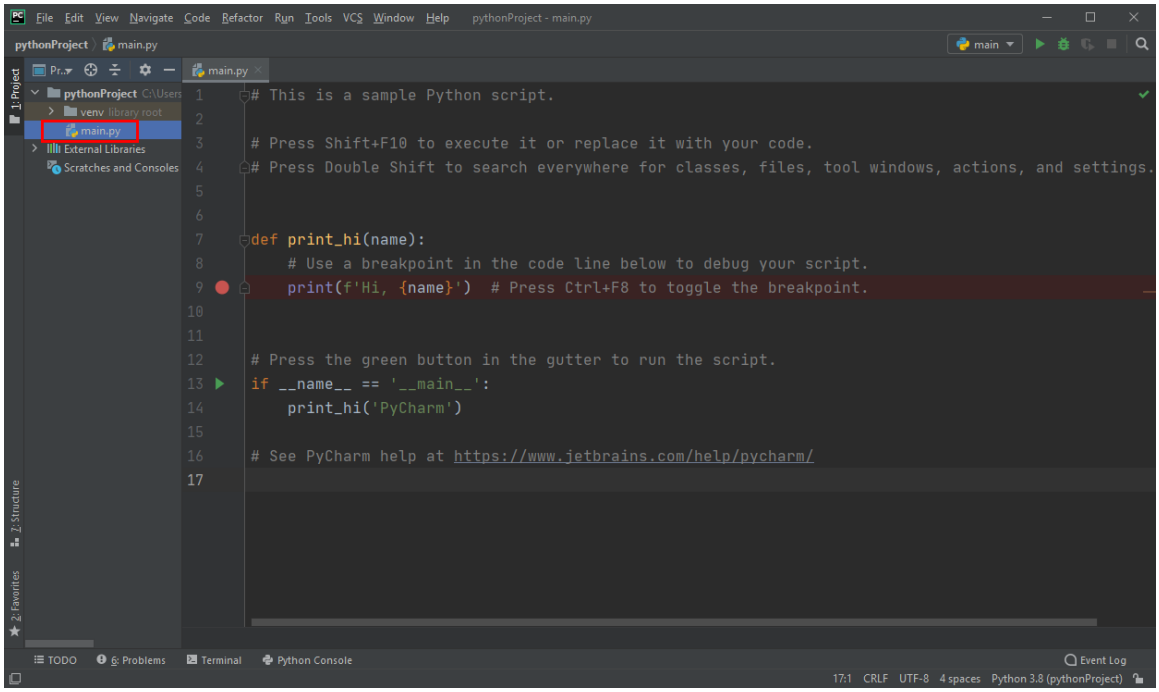
Textbook References

- Chapter 1: Introduction to Programming
  - Section 4: Python Environment and PyCharm
  - Section 5: Basic Syntax

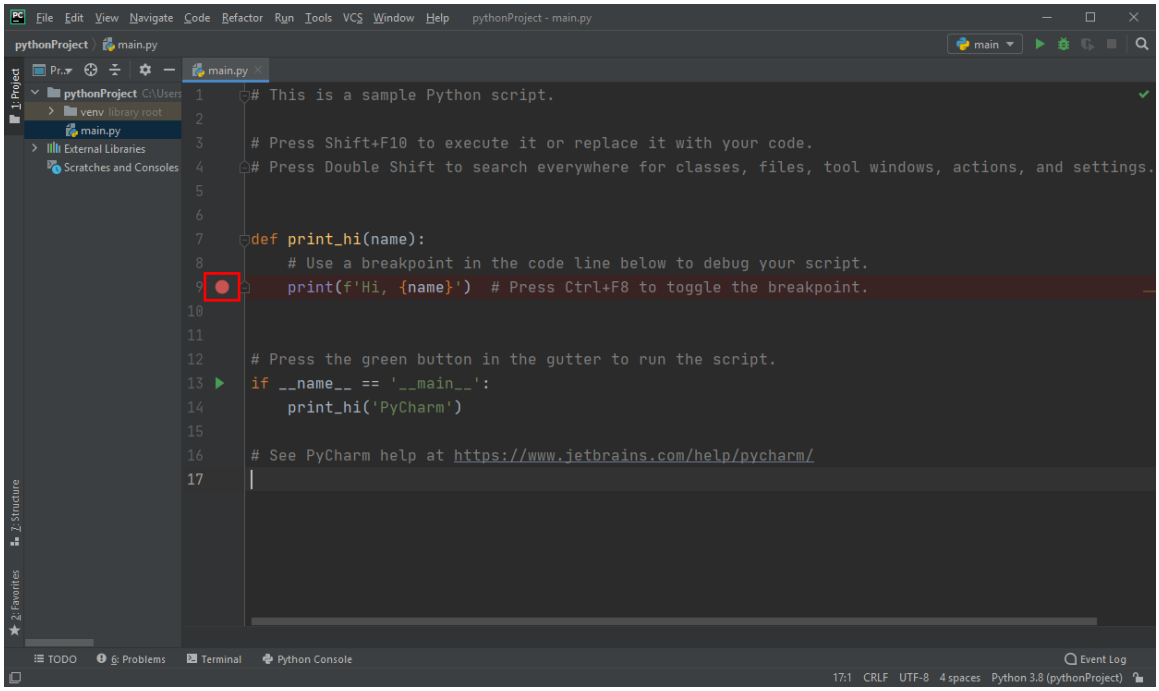
Lab Task 1: Become Familiar with Python Code

In the following task, you will experiment with the ***main.py*** file created by PyCharm.

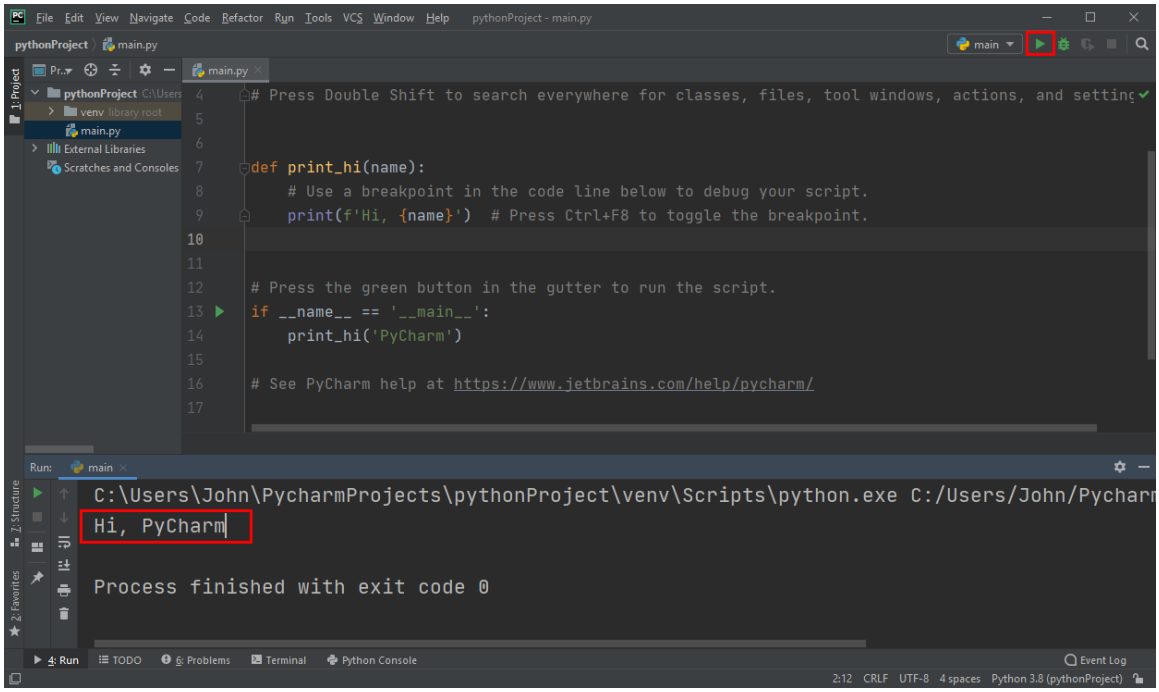
1 In PyCharm, click the ***main.py*** file to display it.



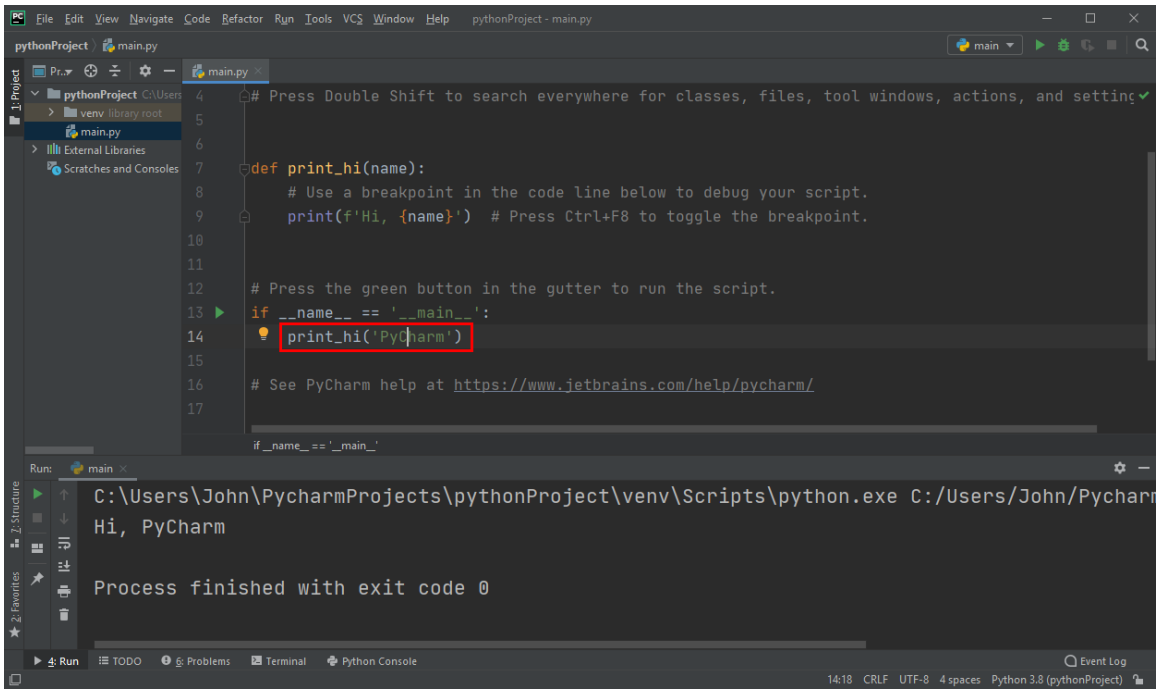
2 Click the red dot on line 9 to remove it (it is related to code debugging, which is not covered in the course).



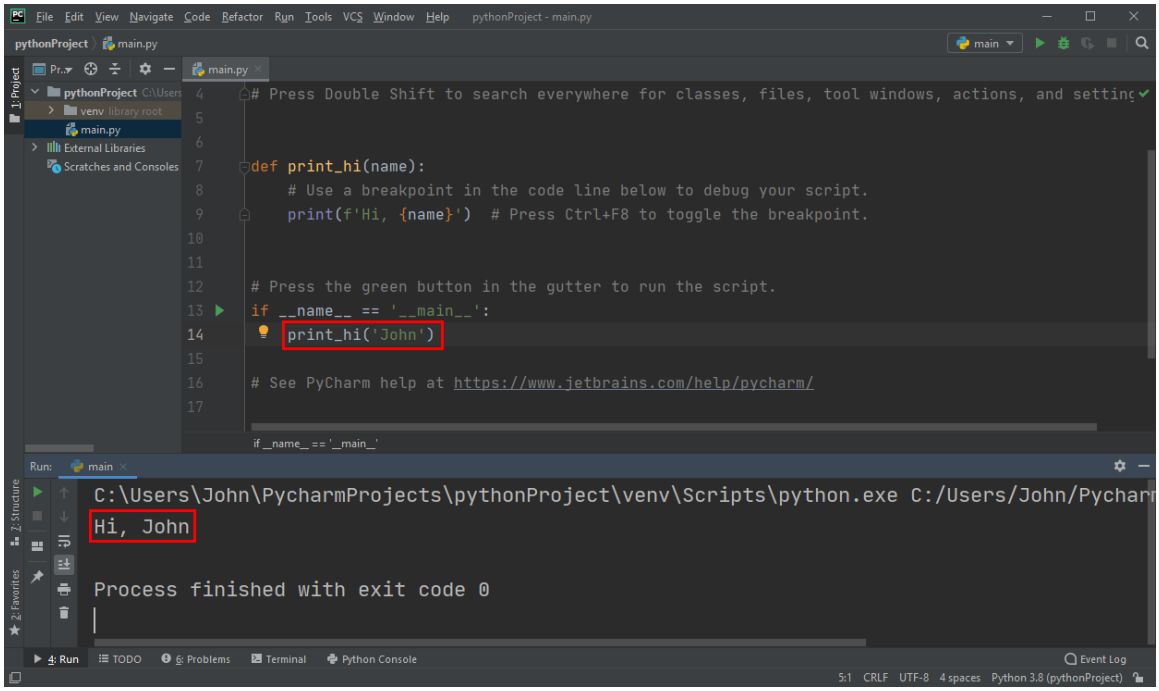
3 Execute the script by clicking the green arrow at the top left corner of the window. Note that the result of the execution is the text ***Hi, PyCharm***.



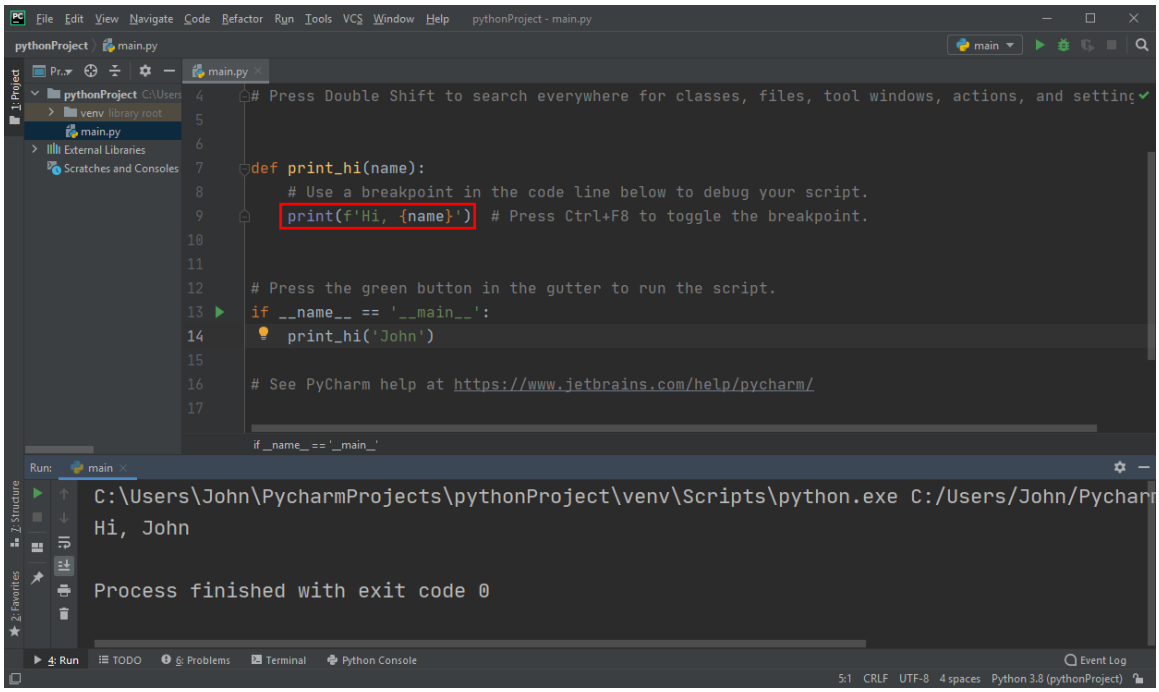
4 In the file, locate the word ***PyCharm*** and change it to your name.



5 Run the file again, and note that the output this time is your name.



6 Note that the word ***Hi*** is not in the same line as the name. Locate the word ***Hi*** in the file command that prints the text.



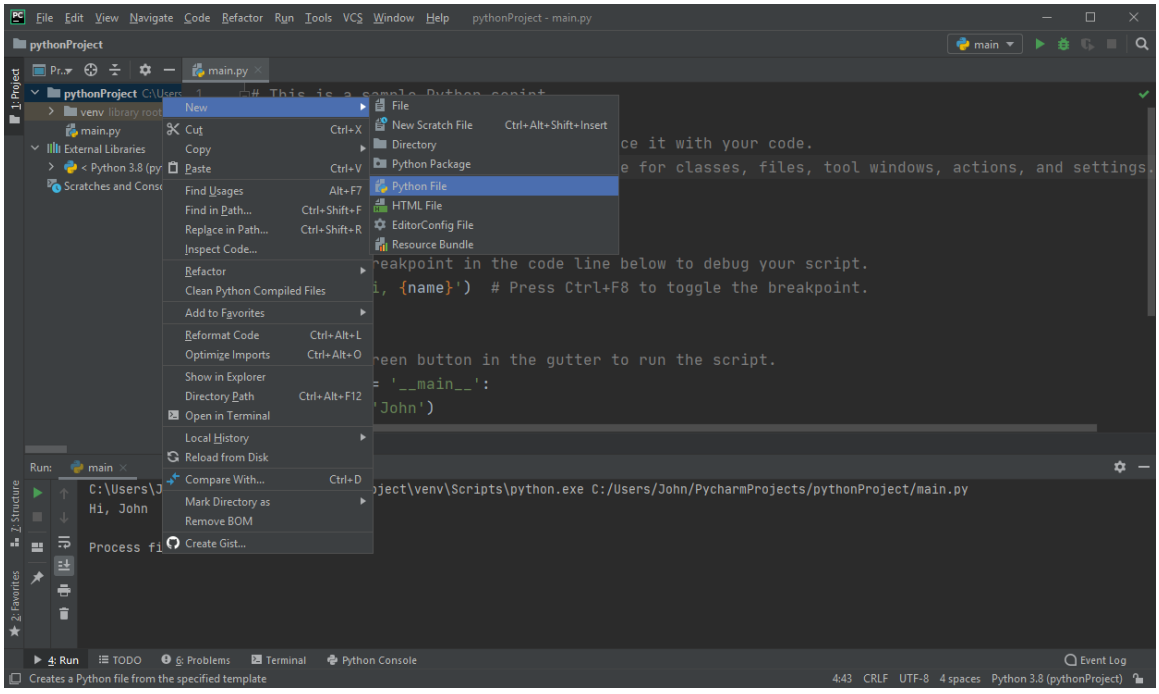
7 Think about the script's execution path. What do you think happens there?

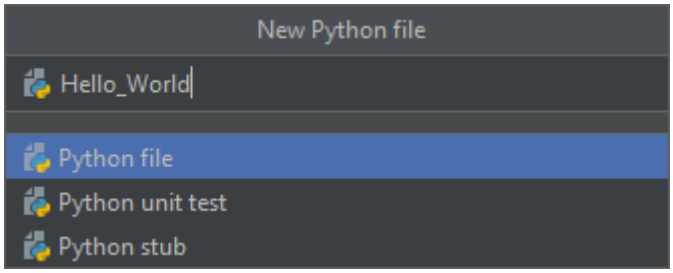
The name provided on line 14 is passed to the section of line 9 and then printed to the screen.
Lines 13 and 14 are the first lines executed in the file. This will be clarified in future modules, but for now, it should only be something to think about.

Lab Task 2: Hello World!

In the following task, you will write your first lines of code, learn to use comments, and receive an output.

1 Create a new Python file and name it ***Hello_World***.





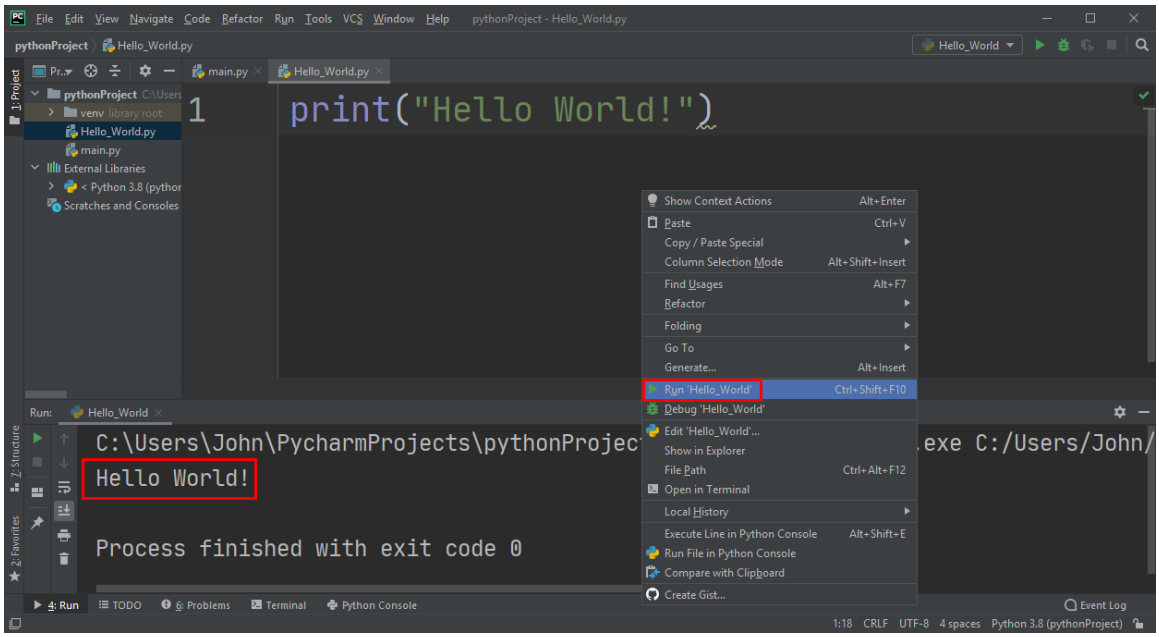
2 Write a command to print the text *Hello World!* using the ***print("Hello World!")*** function.

```
print("Hello World!")
```

3 Run the script by clicking the green arrow. Note that the output does not match the content of the file. What do you think happened?

By clicking the green arrow, PyCharm executes the previously used Python file instead of the current one in the view.

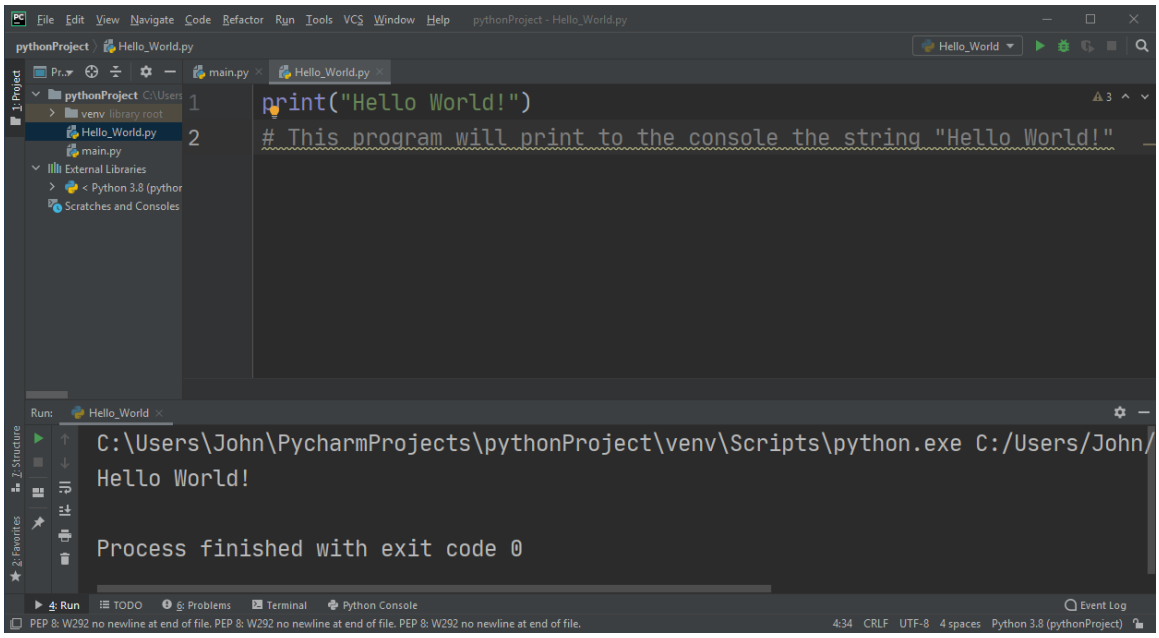
4 To make PyCharm execute the currently viewed file, right-click its content and select ***Run 'Hello_World'***.



5 Add a comment to the code using **#** with the following text after it:
This program will print to the console the string "Hello World!"

```
print("Hello World!")
# This program will print to the console the string "Hello World!"
```

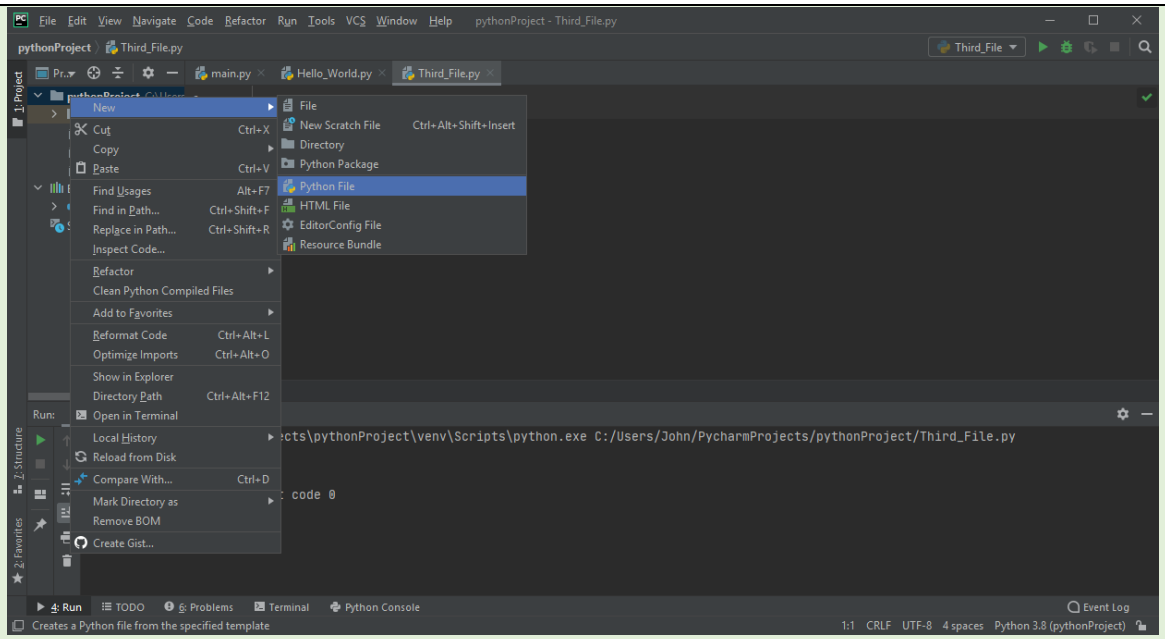
6 Execute the file again and note that the content of the comment does not affect the output.



7 What are comments used for when writing scripts and programs?

Comments are used to document the code. When writing large scripts, using comments to explain lines in the code will save the time and effort of trying to understand the purpose of each line. Using comments is considered a best practice.

8 Create a new file in the project and write a line of code to print the text *I'm a Programmer*. Use three quotation marks (***""" text """***) to describe how to create a new Python file, and run it using ***Ctrl + Shift + F10***.




```
print("I'm a Programmer")
"""
To create a new Python file, right-click the project's name
and select the option 'python file'. Name the file, write
some lines of code, and execute it by clicking the green arrow.
"""
```